

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE AASHTO T 27

APPARATUS

- [] Sieves
- [] Mechanical Sieve Shaker (optional)
- [] Oven maintained at $230 \pm 9^{\circ}\text{F}$
- [] Electric or gas hot plate

PROCEDURE

- [] Weight of sample is as follows. (Samples larger than capacity of balance may be divided into suitable increments, tested, and the results combined. HMA aggregate samples shall be the remaining material from ITM 571 or ITM 586)

	<u>Minimum Weight (g)</u>	<u>Maximum Weight (g)</u>
[] <u>Fine Aggregates</u>	300	----
<u>*Coarse Aggregate</u>		
[] No. 2	11,300	----
[] No. 5	6000	8000
[] No. 8	6000	8000
[] No. 9	4000	6000
[] No. 11	2000	----
[] No. 12	1000	----
[] No. 43	6000	8000
[] No. 53	6000	8000
[] No. 73	6000	8000
[] No. 91	6000	8000
<u>Structure Backfill</u>		
[] No. 30	300	----
[] No. 4	300	----
[] 1/2 in.	4000	6000
[] 1 in.	4000	6000
[] 1 1/2 in.	4000	6000
[] 2 in.	4000	6000
[] <u>B Borrow</u>	4000	6000

- * Aggregates other than sizes listed shall have a minimum weight in accordance with the Certified Plant Quality Control Plan

AASHTO T 27

- [] Sample dried to constant weight at $230 \pm 9^{\circ}\text{F}$ in oven or by hot plate
- [] Weight of sample determined to nearest 0.1% of the total original dry sample weight
- [] Sample sieved for the time determined in accordance with ITM 906. Minimum times are as follows:

Fine Aggregates	15 min.
Coarse Aggregate Size 9 or Larger	5 min.
Coarse Aggregate Smaller than Size 9	10 min.
Structure Backfill: No. 30 and No. 4	15 min.
Structure Backfill: 1/2 in., 1 in., 1 1/2 in., and 2 in.	5 min.
Aggregate from ITM 571 or ITM 586	10 min.

- [] If hand sieving, particles not forced to pass through opening
- [] Aggregate on each sieve weighed to 0.1% of total original dry sample weight
- [] Weight of aggregate on each sieve not greater than weight indicated in Table 1
- [] The difference between the original dry weight and the sum of all the fractional weights retained (including the material in the pan) and the weight of material removed by decantation, if applicable, is equal to or less than 0.3 percent

$$\frac{\text{Original Dry Weight} - \text{Summation Weights Measured}}{\text{Original Dry Weight}} \times 100 \leq 0.3\%$$

- [] Percent passing each sieve is calculated to nearest 0.1% based on original dry sample weight

NA - Not Applicable

X - Requires Corrective Action

√ - Satisfactory

Acceptance Technician

INDOT

Date

Comments _____

TABLE 1
APPROXIMATED SIEVE OVERLOAD

SCREEN SIZE	STANDARD 372 mm x 580 mm (15" x 23")	STANDARD 350 mm x 350 mm (14" x 14")	304.8 mm (12") DIAMETER	203.2 mm (8") DIAMETER
75 mm (3")	40.5 kg	23.0 kg	12.6 kg	-----
50 mm (2")	27.0 kg	15.3 kg	8.4 kg	3.6 kg
37.5 mm (1-1/2")	20.2 kg	11.5 kg	6.3 kg	2.7 kg
25 mm (1")	13.5 kg	7.7 kg	4.2 kg	1.8 kg
19 mm (3/4")	10.2 kg	5.8 kg	3.2 kg	1.4 kg
12.5 mm (1/2")	6.7 kg	3.8 kg	2.1 kg	890 g
9.5 mm (3/8")	5.1 kg	2.9 kg	1.6 kg	670 g
4.75 mm (#4)	2.6 kg	1.5 kg	800 g	330 g
203.2 mm (8") diameter sieves, 2.36 mm to 75 μ m (#8 to #200) shall not exceed 200g / sieve				
304.8 mm (12") diameter sieves, 2.36 mm to 75 μ m (#8 to #200) shall not exceed 469g / sieve				